AMSAT News Service Weekly Bulletins
Issue: ANS-021
Date: 2018-01-21
Sources: amsat-ans-2018-ans-021-weekly-hyperkitty-9523fd4d4a.txt

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AMSAT NEWS SERVICE
ANS-021

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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ANS-021 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 021.01
>From AMSAT HQ KENSINGTON, MD.
January 21, 2017
To All RADIO AMATEURS
BID: $ANS-021.01

Dr. Junior Torres de Castro, PY2BJO SK

It is with great sadness that the Directors and Officers of AMSAT-North America announce the passing of Dr. Junior Torres de Castro, PY2BJO. According to his son, Allan Kardec, Junior passed away on January 17, 2018 in Sao Paulo, Brazil.

A very active radio amateur, Junior was a great collaborator of LABRE (The League of Brazilian Amateur Radio Transmitters) serving for a time as its President. He was also a founder of BRAMSAT, the Brazilian AMSAT group as well as an active member of the AMSAT-NA Board of Directors during the early 1990s.

But, perhaps what Junior will be best remembered for among the rest of the world's amateurs was his work with AMSAT-NA in helping to build (and financially underwrite) Brazil's very first amateur radio satellite.

Called "DOVE short for "Digital Orbiting Voice Encoder", the satellite was successfully launched on January 22, 1990 on an Ariane 4 rocket from the European Space Agency's Kourou Space Center in French Guiana. Besides the main payload, that launch also included three other AMSAT MicroSats along with two larger UOSats. Surrey Satellite Technology in England built the two larger satellites.

Junior's vision for his DOVE satellite was to provide a strong 2m, audio FM downlink signal ("This is DOVE in Space") that could be easily received by educational institutions around the world. Downlink telemetry was via 1200 Baud AFSK, AX.25 packet radio, a data format that was easily decoded with receivers and TNCs that were very popular among radio amateurs at the time.

When told of Junior's passing, Jan King, W3GEY, a founding AMSAT Director and AMSAT's Vice President of Engineering during the MicroSat project said that, "I'm very sorry to hear about Junior. He certainly made the 4 MicroSat mission happen. He was a very important part of AMSAT and a fond memory for me."

Likewise, Former AMSAT-NA BOD member Bob McGwier, N4HY, noted that, "This is a sad day. Junior was a great guy, full of life, and he loved AMSAT. It was a pleasure for me to help build his MicroSat for him. When I became an AMSAT employee for getting these spacecraft done, Junior paid the bills."

Another MicroSat Project team member, Jim White, WD0E, noted that, "This is indeed sad news. It was a pleasure to work with him on DOVE. He was a very warm and generous person and not only conceived of and funded DOVE, but also a receiver for the 60-foot radio dish that the Table Mountain the Deep Space Exploration Society was refurbishing. He was always tinkering and building things at his house near Sao Paulo. He even dreamed of building a round swimming pool that, when drained, would double as a radio astronomy dish! During the time his DOVE satellite was sending "This is DOVE in space" audio from orbit we received nearly 200 SWL cards from around the world, all of which we shared with him. Needless to say, he was absolutely delighted."

At ANS deadline, funeral arrangements for Junior were still pending. But word was received that his funeral and interment was to be in at the Gethsemane Cemetery in Sao Paulo, Brazil.

[ANS thanks Keith KB1SF/VA3KSF for the above information]

AMSAT Membership Deal and Getting Started

Just a few reminders for all the new folks joining us:

AMSAT membership supports the organization and construction of new satellites. Right now, we are offering a free PDF copy of our Getting Started with Amateur Satellites with every new on-line membership. This is -the- primer for getting on the sats, and is updated every year. See https://www.amsat.org/product-category/amsat-membership/

AMSAT also sells both the popular Arrow Antenna satellite models and the M2 LEOpack antennas. Sales also benefit AMSAT projects. https://www.amsat.org/product-category/hardware/

[ANS thanks AMSAT Office for the above information]

Upcoming club satellite presentations (and hopefully demos...)

Philip N4HF announces a couple of presentations he'll be doing.

1) Blue Ridge ARC (Henderson County NC), Tuesday March 6, 7pm.
http://radioclub.org/ (this club has also started streaming club meetings via TeamViewer; the demo, if it happens, will be outside though)

2) Haywood County ARC (NC), Thursday April 12, 7 pm.
http://kw4p.org/ (Meeting place is incorrect on the website, but hopefully that will be updated in the next few days)

Philip states he will be at one hamfest under the AMSAT banner, and possibly two, in the next couple of months. He will be announcing those when the info is finalized.

[ANS thanks Philip N4HF for the above information]

Zhou Enlai Student Satellite to Launch

The 2U CubeSat Zhou Enlai, developed with primary and middle school students, is expected to launch on Friday, January 19, 2018

The satellite is named after the first Premier of the PRC. Zhou Enlai held office from October 1949 until January 1976.

A report on Xinhua Net says:

The satellite was sent from its production base in Huai'an Youth Comprehensive Development Base in east China's Jiangsu Province to Jiuquan Satellite Launch Center in northwest China's Gansu Province Monday, where a CZ-11 solid fuel rocket is scheduled to put it into orbit Friday.

Twenty teenagers who participated in the development project accompanied the transport group to the launch center and will witness the lift-off.

Zhang Xiang, chief designer of the satellite, said that the nano-satellite, weighing 2 kilograms, is set to run in sun-synchronous orbit. Equipped with a HD optical camera, it can capture space photos with the highest resolution among those shot by other Chinese satellites for scientific education purpose.

Zhang said that the students had taken their spare time to join the development and groundbased simulation performance of the satellite, and had learnt to assemble and practice voice data transfer and telecommunication applications.

"A scientific satellite like this is like a teacher in space, carrying cameras or spectroscopes to study the upper atmosphere or to shoot space pictures of the stars. Students can grasp the mystery of the universe through the messages transmitted by the teacher," said Zhang, a professor with Nanjing University of Science and Engineering.

Read the full story at
http://www.xinhuanet.com/english/2018-01/17/c_136902466.htm

The IARU satellite pages list a 2U CubeSat called HA-1 with FM transponder and SSTV developed by the Teenagers Amateur Radio Center of Activity in Huai'an. Zhou Enlai may well be the new name for this satellite.
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=589

[ANS thanks Southgate ARN for the above information]

AO-92 camera results

For those that have not been following AMSAT on Twitter or Facebook, we have done a few camera runs with AO-92 with very good results. A pass this morning yielded 4 good images, two of which I have located their position on the ground. The images can be seen at:
http://www.amsat.org/tlm/fox1d/images/index1.html

Some side by side comparisons with Google Earth and NOAA images can be found at:
https://twitter.com/AMSAT/status/953294176933896195 and
https://twitter.com/AMSAT/status/953304248162406401 .

Congratulations again to Virginia Tech, and thanks for providing the camera experiments for AO-92 and Fox-1Cliff!

[ANS thanks Drew KO4MA for the above information]

N8RO Logs 488th US Grid - Earns Grid Master Award #8

Congratulations to Ron Oldham, N8RO, to log his last grid needed to have worked via satellite all 488 grids in the Lower 48 United States. Ron's message on the amsat-bb reads, "On Sunday [January 14] I was able to log the last grid I needed to complete the 488 US grids. I would like to publicly thank Doug, N6UA, for going out of his way to help me get DN23 in my log. Without the efforts of many portable satellite operators like Doug it would not be possible to achieve this accomplishment. Many thanks to all of the operators that helped me throughout the years."

Ron also noted the Top 10 portable satellite operators who's efforts have provided opportunities for contacts including:
ND9M - 332
K8YSE - 273
AC0RA - 234
W5PFG - 205
WC7V - 126
WD9EWK - 117
KA6SIP - 108
NJ7H - 89
A5CK - 710
KB5WIA - 610
KB0RZD - 6

On January 17 Damon, WA4HFN announced, "Congrats to Ron,N8RO for earning Grid Master Award #8". The Grid Master Award is given for confirmed satellite contacts with all 488 U.S. Grids." These awards are available at no cost but Damon requests that you make a donation to AMSAT-NA. For more information visit the web site: http://www.squirtthebirds.com

[ANS thanks Ron, N8RO via the amsat-bb, and Damon, WA4HFN for the above information]

Updates to AMSAT-NA TLE Distribution for 1-16-2018

Here is the current tracking status for AO-92 and PICSAT.

Updates to AMSAT-NA TLE Distribution

Nico Janssen, PA0DLO, by detailed doppler measurements has confirmed the identity of the AO-92 and PICSAT from the 1-12-2018 0358 GMT India PSLV-C40 launch. They have been added to the AMSAT-NA TLE Distribution:
PICSAT - NORAD CAT ID 43131
AO-92 - NORAD CAT ID 43137

The following objects have been dropped from the AMSAT-NA TLE Distribution:
OBJECT A - NORAD CAT ID 43111
OBJECT B - NORAD CAT ID 43112
OBJECT C - NORAD CAT ID 43113
OBJECT D - NORAD CAT ID 43114
OBJECT E - NORAD CAT ID 43115
OBJECT F - NORAD CAT ID 43116
OBJECT T - NORAD CAT ID 43128
OBJECT U - NORAD CAT ID 43129
99934 - NORAD CAT ID 99934

Please modify your tracking program as required.

To receive AMSAT's Keplerian Element updates directly to your e-mail box subscribe at:
http://www.amsat.org/mailman/listinfo/keps

[ANS thanks AMSAT for the above information]

Fox-1 MPPT Developers Interviewed on HamRadio360 Podcast

Cale, K4CDN, interviewed the Salmi brothers, Brent, KB1LQD, and Bryce, KB1LQC, on the HamRadio360 podcast. Brent and Bryce are the developers of the Maximum Power Point Tracker (MPPT) used in the Fox-1B, Fox-1Cliff, and Fox-1D cubesats. The MPPT is the controlling interface between the solar panel with the electrical system of the Fox-1 satellites in such a way that the conditions for maximum power are always met when needed.

Cale, Brent and Bryce also discuss their Open Source Digital Radio company, Faraday RF.

Listen to the HamRadio360 podcast at:
http://tinyurl.com/ANS-HamRadio360-Podcast

[ANS thanks Cale, K4CDN, and HamRadio360 for the above information]

ARISS News

+ A Successful contact was made between Higher National School of Computer Science and Systems Analysis (ENSIAS), Rabat, Morocco and Astronaut Mark Vande Hei KG5GNP using Callsign NA1SS. The contact began 2018-01-03 13:52 UTC and lasted about nine and a half minutes. Contact was telebridge via VK5ZAI].
  ARISS Mentor was Eskil SM5SRR.

+ A Successful contact was made between Prva srednja informaticka škola, Zagreb, Croatia] and Astronaut Scott Tingle KG5NZA using Callsign NA1SS. The contact began 2018-01-18 08:46 UTC and lasted about nine and a half minutes. Contact was telebridge via VK6MJ.
  ARISS Mentor was Marco 9A8MM.

Upcoming ARISS Contact Schedule as of 2018-01-20 01:00 UTC

Quick list of scheduled contacts and events:

Naka Junior High School, Kakamigahara City, Japan, direct via 8J25D
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Mark Vande Hei KG5GNP
Contact is a go for: Mon 2018-01-22 10:23:21 UTC
Contact is direct with 8J25D and should be audible over Japan and adjacent areas.

The English School, Nicosia, Cyprus, telebridge via W6SRJ
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Mark Vande Hei KG5GNP
Contact is a go for: Wed 2018-01-24 10:35:45 UTC

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above information]

Satellite Shorts From All Over

+ MONTSERRAT, VP2M. Daniel, KD9HNL is QRV as VP2MDH until January 29. Activity is on various FM satellites. QSL via LoTW.

  [ANS thanks ARRL DX news for the above information]

+ AMSAT-NA President Joe Spier K6WAO Interviewed in February QST

  Read Steve Ford's WB8IMY interview of AMSAT-NA President Joe Spier K6WAO in Frebrauary's QST. The interview which, appears on page 69 of the issue, covers Joe's amateur radiocCareer, his vision for the future of AMSAT-NA and amateur satelites in general, challenges on the horizon, prospect of HEOs and geostationary amateur satellites.

  [ANS thanks QST for the above information]

+ More background on the satellites aboard the PSLV-C40 flight:
  https://amsat-uk.org/2018/01/13/ham-radio-cubesat-launch-success/

  [ANS thanks AMSAT-UK for the above information]

+ NASA Social Media event
  https://www.nasa.gov/social/state-of-nasa-social-2018

  [ANS thanks NASA for the above information]

+ Jerry Buxton N0JY VP Enginneering On HamTalkLive

  On January 18, Thursday night at 9 pm Eastern time, Jerry Buxton, N0JY the vice president for engineering at AMSAT was interview on the HamTalkLive webcast to talk about the process of building amateur radio satellites, and the latest on the newest bird, Fox 1D which just arrived in space last week!

  If you miss the show live, you can listen on demand 24/7/365.25 at:
  https://www.spreaker.com/show/ham-talk-live - select episode #98.
  or
  https://tinyurl.com/ANS021-HamTalkLive

  [ANS thanks HamTalkLive.com for the above information])

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, AA8EM
aa8em at amsat dot org